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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,081	04/21/2008	Werner Scholtyssek	SCHOLTYSSEK	8109

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EXAMINER

REDDICK, MARIE L

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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05/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,081	SCHOLTYSEK ET AL.	
	Examiner	Art Unit	
	MARIE REDDICK	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/30/05; 04/06/06 & 04/21/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☒ Claim(s) 23-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/06/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings filed on 12/30/05 are accepted by the Examiner.

Specification

3. The disclosure is objected to because of the following informalities: On page 4, paragraph [0012], "acrylic acid" and "methacrylic acid" are not species of the genus "acrylic acid esters" and "N-vinylpyrrolidon" should read "N-vinylpyrrolidone"; On page 6, paragraph [0016], it is believed that "maleinic acid" should read "maleic acid" and "N-vinyl-pyrrolidon" should read "N-vinylpyrrolidone".

Appropriate correction is required.

Claim Objections

4. Claims 23-26 are objected to because of the following informalities: In claims 23-25, the recited singular form of "polymer" should exist in the plural form as "polymers" so as to engender claim language clarity. In claim 26 @ line 5, it is suggested that applicants delete "1.50" and insert in its stead, "1.5" so as to maintain claim language clarity and consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 15-27 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for i) a dispersoid of a polymer derived from ethylenically unsaturated monomers which include olefins such as ethylene, propylene, and isobutylene, halogenated olefins such as vinyl chloride and vinyl fluoride, (meth)acrylic acid esters such as methyl methacrylate, methyl acrylate, ethylacrylate, etc., (meth)acrylic acids, dimethyl aminoethyl acrylate and quaternary compounds thereof, acrylamide monomers, styrol monomers, N-vinylpyrrolidone, diene monomers such as butadiene, isoprene and chloroprene, vinyl ester monomers such as vinyl acetate, vinyl propionate and vinyl versatate; ii) a first dispersing agent which is a hydrolysed vinyl ester-ethylene copolymer wherein the vinyl ester includes vinyl formate, vinyl acetate, vinyl propionate and vinyl pivalate and iii) a further dispersing agent which includes polyvinyl alcohol does not reasonably provide enablement for i) a dispersoid of a polymer of an ethylenic unsaturated monomer, ii) a first dispersing agent from a polyvinyl alcohol modified by ethylene units and iii) a further dispersing agent which is a vinyl alcohol polymer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The invention as described in the specification is drawn to a polyvinyl acetate adhesive of improved properties relative to water stability and heat resistance. Because it is believed that the nature of the ingredients would affect such, it is doubted that all would be operable or that given the present specification, one could determine, without undue experimentation, which are or are not operable falling within the broad scope of the claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 15-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited “in form of preferably” per claim 15 constitutes indefinite subject matter as per it not being readily ascertainable as to if or how said objectionable phrase further limits the claims. The phrase “preferably” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

B) The recited “watery dispersion” per claim 15 and “watery solution” per claim 26 constitutes indefinite subject matter as per the metes and bounds of said terminology engender an indeterminacy in scope. It is believed that perhaps Applicant intends “aqueous” in both instances. Applicants' comments are welcomed. Furthermore, Applicants are cautioned against engendering a New Matter situation.

C) The recited “ethylene units” per claim 15 constitutes indefinite subject matter as per it not being readily ascertainable if applicants intend “ethylene” or “ethylenically unsaturated monomer units”, the two being substantially different.

D) The recited “relative to” per claims 18, 22, 25 & 26 constitutes indefinite subject matter as per the metes and bounds of “relative”, in this context, engenders an indeterminacy in scope.

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- E) The recited “at least one of the vinyl alcohol polymer” per claims 23 and 24 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.
- F) The recited “each in water solution” per claim 26 constitutes indefinite subject matter as per it not being clear as to what the “each” is referring to.
- G) The recited “from 0.1 to 1.50 Mol% by weight” per claim 26 constitutes indefinite subject matter as per it not being readily ascertainable as to how the content of vinyl alcohol polymer can be defined in terms of both Mol and weight %. It is suggested that applicant delete “Mol”, consistent with the content defining the further partially saponified polymer.
- H) The recited “several layers” per claim 27 constitutes indefinite subject matter as per the metes and bounds of “several”, in this context, engender an indeterminacy in scope.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 15, 16, 18-25 & 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tanimoto et al (JP 2000230098).

Tanimoto et al teach aqueous emulsion compositions excellent in viscosity stability and water-resistant adhesiveness, useful as woodwork & plywood adhesives, and defined basically as containing A) an amino-containing water-based resin, B) an aqueous emulsion comprising i) a dispersoid and ii) dispersants wherein the dispersoid is a polymer having units derived from ethylenically unsaturated monomers which include vinyl acetate, ethylene, etc. and diene monomers such as butadiene, preferably the dispersoid is polyvinyl acetate and the dispersant is a vinyl alcohol polymer having a degree of saponification of at least 95 mol % and/or a polyvinyl alcohol polymer containing 1-15 mol % of ethylene units in the molecule and having a degree of saponification of at least 95 mol % and a degree of polymerization of 100-7000 and C) other conventional additives such as organic solvents, starches, water-soluble polymers such as polyvinyl alcohol, etc. (Abstract, paragraphs [0001]-[0008], [0010]-[0012] and [0025] of Tanimoto et al and claims 15, 16, 19-21, 23, 24 & 27). Tanimoto et al further teach that the dispersant ii) is used in an amount of 3-20 wt. % and that the ratio of amino-containing water-based resin (A) to aqueous emulsion (B) is 99.9/0.1 to 50/50 (paragraphs [0009] & [0024] of Tanimoto et al and claims 18, 22 & 25). Tanimoto et al therefore anticipate the instantly claimed invention.

As to the pH limitation (claim 15), although silent, it is reasonable that the aqueous emulsion system of Tanimoto et al may very well meet the pH

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limitation since the aqueous emulsion system of Tanimoto et al is essentially the same as and made under essentially the same conditions as the claimed aqueous dispersion system, in the absence of the USPTO to have at its disposal the tools and/or facilities deemed necessary to make physical determinations of this sort. The burden to show that this, in fact, is not the case, is shifted to applicants. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product.

Even if it turns out that the Examiner has somehow missed the boat and the claims are not anticipated, it would have been obvious to the skilled artisan, at the time the invention was made, to extrapolate, from Tanimoto et al, the precisely defined adhesive as per such having been within the purview of the general disclosure of Tanimoto et al and with a reasonable expectation of success.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto et al (JP 2000230098).

Tanimoto et al is as discussed supra and as applied to claims 15, 16, 18-25 & 27.

Further, Tanimoto et al differs basically from the claimed invention as per the non-express disclosure of an embodiment directed to the adhesive of claim 16, wherein the polyvinyl acetate has a degree of polymerization of from 100 to 2500 (claim 17). However, the polyvinyl acetate component (dispersoid) of

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Tanimoto et al is generic too and, as such, necessarily implies that any polyvinyl acetate, including the claimed polyvinyl acetate, would have been operable within the scope of patentees' invention and with a reasonable expectation of success, absent some evidence of unusual or unexpected results.

Claim Rejections - 35 USC § 103

17. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto et al (JP 2000230098) in combination with Eck et al (US 4,528,315).

Tanimoto et al is as discussed supra and as applied to claims 15-25 & 27. Further, Tanimoto et al differs basically from the claimed invention as per the non-express disclosure of an embodiment directed to the adhesive of claim 15, wherein the vinyl alcohol polymer comprises a first partially saponified polymer with a polymerization degree of from 1500 to 3000, a degree of hydrolysis from 88 to 92 Mol % and a viscosity from 15 to 30 mPa. sec., each in watery solution, in an amount of from 0.1 to 1.50 % by weight, relative to the dispersion, and a further partially saponified polymer with a polymerization-and hydrolysis degree like the first partially saponified polymer and having a viscosity from 30 to 50 mPa. sec, each in a 4 % watery solution, in an amount from 0.5 to 1.5 % by weight, relative to the dispersion (claim 26).

Eck et al teach a process for the preparation of aqueous dispersions stabilized by protective colloid(s) suitable as adhesives, also emulsion (co)polymerization of vinyl halides and/or vinyl esters and, if needed, additional monomers wherein the emulsion (co)polymerization is carried out in the presence of at least one polyvinyl alcohol (PVAL) governed by a degree of hydrolysis of 70 to 99.8 mol. % and a degree of polymerization of 200 to 3,000, as a first dispersing agent

(the Abstract, col. 1, lines 6-13, 29-36 & 53-68 & col. 2, lines 1-8 of Eck et al). Eck et al further teach for the use in the building sector as an adhesive, the use of protective colloids, during polymerization, is suggested and includes **at least one** polyvinyl alcohol with a degree of hydrolysis of 70 to 99.8 mol. %, preferably from 74 to 99.5 mol. %, a degree of polymerization of from 200 to 3,000 and a viscosity of from about 3 to about 50 m.Pas of a 4 % by weight aqueous solution at 20 degree C, added in amounts of 0.5 to 15 wt. %, preferably, 3 to 10 wt. %, calculated with respect to the monomers that are liquid under reaction conditions (the paragraph bridging cols. 3 & 4 and col. 4, lines 8-23 of Eck et al and claim 26). Eck et al further teach, operable within the scope of the invention, the use of mixtures of various different protective colloids (col. 4, lines 28-37 of Eck et al and claim 26).

Therefore, one having ordinary skill in the art, following the aforementioned guidelines of Eck et al, would have found it obvious, at the time the invention was made, to modify Tanimoto et al by optimizing the aqueous emulsion system using a mixture of partially saponified polymers as suggested by Eck et al in the aqueous emulsion system of Tanimoto et al and with a reasonable expectation of enhancing the stability of the aqueous emulsion system of Tanimoto et al, such involving only routine experimentation and with a reasonable expectation of success. Criticality for such, clearly commensurate in scope with the claims, not having been demonstrated on this record.

18. JP 2002241411 to Tanimoto et al and US Patents 5,143,966 to Lee et al, 6,221,952 to Nakamae and 6,706,805 to Weitzel are cited as of interest in teaching vinyl ester

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polymers stabilized with vinyl alcohol polymers and considered merely cumulative to the prior art *supra*.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIE REDDICK whose telephone number is 2-5816.

The examiner can normally be reached on 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID WU can be reached on 2-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MR/
05/19/09

/David Wu/
Supervisory Patent Examiner, Art Unit 1796